

**U.S. FISH AND WILDLIFE SERVICE  
SPECIES ASSESSMENT AND LISTING PRIORITY ASSIGNMENT FORM**

SCIENTIFIC NAME: Platanthera integrilabia (Correll) Leur

COMMON NAME: white fringeless orchid

LEAD REGION: 4

INFORMATION CURRENT AS OF: October 2005

**STATUS/ACTION:**

☐ Species assessment - determined species did not meet the definition of endangered or threatened under the Act and, therefore, was not elevated to Candidate status

☐ New candidate

☒ Continuing candidate

☐ Non-petitioned

☒ Petitioned - Date petition received: May 11, 2004

☐ 90-day positive - FR date:

☐ 12-month warranted but precluded - FR date:

☐ Did the petition request a reclassification of a listed species?

**FOR PETITIONED CANDIDATE SPECIES:**

a. Is listing warranted (if yes, see summary of threats below)? yes

b. To date, has publication of a proposal to list been precluded by other higher priority listing actions? yes

c. If the answer to a. and b. is "yes", provide an explanation of why the action is precluded. We find that the immediate issuance of a proposed rule and timely promulgation of a final rule for this species has been, for the preceding 12 months, and continues to be, precluded by higher priority listing actions (including candidate species with lower LPNs). During the past 12 months, almost our entire national listing budget has been consumed by work on various listing actions to comply with court orders and court-approved settlement agreements, meeting statutory deadlines for petition findings or listing determinations, emergency listing evaluations and determinations, and essential litigation-related, administrative, and program management tasks. We will continue to monitor the status of this species as new information becomes available. This review will determine if a change in status is warranted, including the need to make prompt use of emergency listing procedures. For information on listing actions taken over the past 12 months, see the discussion of "Progress on Revising the Lists," in the current CNOR which can be viewed on our Internet website (<http://endangered.fws.gov/>).

☐ Listing priority change

Former LP: ☐

New LP: \_\_\_\_

Date when the species first became a Candidate (as currently defined): 10/25/1999

\_\_\_\_ Candidate removal: Former LP: \_\_\_\_

\_\_\_\_ A – Taxon is more abundant or widespread than previously believed or not subject to the degree of threats sufficient to warrant issuance of a proposed listing or continuance of candidate status.

\_\_\_\_ U – Taxon not subject to the degree of threats sufficient to warrant issuance of a proposed listing or continuance of candidate status due, in part or totally, to conservation efforts that remove or reduce the threats to the species.

\_\_\_\_ F – Range is no longer a U.S. territory.

\_\_\_\_ I – Insufficient information exists on biological vulnerability and threats to support listing.

\_\_\_\_ M – Taxon mistakenly included in past notice of review.

\_\_\_\_ N – Taxon does not meet the Act's definition of "species."

\_\_\_\_ X – Taxon believed to be extinct.

ANIMAL/PLANT GROUP AND FAMILY: Flowering plants -- Orchidaceae

HISTORICAL STATES/TERRITORIES/COUNTRIES OF OCCURRENCE: Alabama, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Virginia

CURRENT STATES/ COUNTIES/TERRITORIES/COUNTRIES OF OCCURRENCE: Alabama, Georgia, Kentucky, South Carolina (?), Tennessee

#### LAND OWNERSHIP

Federal (U.S. Forest Service and Department of Defense) 23 percent, State (South Carolina State Parks, Tennessee State Parks and State Forests) 13 percent, and private 64 percent.

LEAD REGION CONTACT: Richard Gooch, 404/679-7124

LEAD FIELD OFFICE CONTACT: Asheville, North Carolina Field Office, Robert R. Currie, 828/258-3939, extension 224

#### BIOLOGICAL INFORMATION:

White fringeless orchid was first recognized as a distinct taxon in 1941 when D.S. Correll described this plant as a subspecies of Habenaria (Platanthera) blephariglottis (Correll 1941). C.A. Leur elevated the taxon to full species status in 1975 (Leur 1975). The currently accepted binomial for the species is Platanthera integrilabia (Correll) Leur.

White fringeless orchid is a perennial herb with a light green, 60 centimeter (cm) (23 inches (in)) long, stem that arises from a tuber. The leaves are alternate with entire margins and are narrowly elliptic to lanceolate in shape. The lower leaves are 20 cm (8 in) long and 3 cm (1 in) wide. The upper stem leaves are much smaller. The white flowers are borne in a loose cluster at the end of

the stem. The upper two flower petals are about 7 millimeters (mm) (0.3 in) long and the lower petal (the lip) is about 13 mm (0.5 in) long. The plants flower from late July through September and the small narrow fruiting capsule matures in October (Shea 1992).

Platanthera integrilabia grows in wet, boggy areas at the head of streams and on seepage slopes. It is often associated with Sphagnum in partially, but not fully, shaded areas. The species currently occurs within the Appalachian Plateau Physiographic Province in Kentucky, Tennessee, and Alabama, the Coastal Plain Physiographic Province in Alabama, and the Blue Ridge Province in Georgia and Tennessee (Shea 1992).

Historically, there were at least 90 populations of Platanthera integrilabia. Currently there are only 53 extant sites supporting the species. The species was originally known from Alabama, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia. It has been extirpated from Mississippi, North Carolina, and Virginia. The following summary of the current distribution of the species is from Medley (1980), Shea (1992), White (1998), Deb White (Kentucky State Nature Preserves Commission, personal communication, 1999), and Andrea Shea (Tennessee Department of Environment and Conservation, personal communication, 1999).

Alabama currently supports eight populations of Platanthera integrilabia. Marion County has two sites for the species, both of which are privately owned. One of these sites supported 40 flowering plants in 1991, and the other was estimated to support 1,000 to 3,000 in 1998. Tuscaloosa County has one privately owned site with 17 flowering plants. Winston County has one privately owned site that had 31 flowering plants in 1991 and 1 plant in 1998. Jackson County has one privately owned site that was estimated to support 6 to 12 plants in 1998. Calhoun County has two populations that are on the Department of Defense's Fort McClellan. In 1998, one of these sites had 500 to 750 plants and the other had 75 plants. The lands supporting the species on Ft. McClellan are considered excess by the Department of Defense. It is not currently known who will eventually be responsible for these sites. Claiborne County has one site that supported about 100 plants in 1998; this site is on lands managed by Talladega National Forest.

Georgia currently supports eight populations of Platanthera integrilabia. Carroll County has two privately owned sites. In 1991, one of these had 31 flowering plants and an estimated 5 to 35 plants in 1998. The other had 1 flowering plant in 1991 and an estimated 5 to 15 plants in 1998. Cobb County has one privately owned site that had three flowering plants in 1991. Coweta, Rabun, Forsyth, and Chattooga Counties each have one privately owned site. The most recent (1990 to 1998) records for these sites indicate that they supported 15 to 50, 39, 2, and "a few" flowering plants, respectively. The only Federally owned site is in Stephens County on the Chattahoochee National Forest. This site supported 11 flowering plants in 1991.

Kentucky is the only State where a majority of the sites are under Federal ownership. McCreary County has three sites for the species, all of which are within Daniel Boone National Forest. In 1991, the largest of these sites contained 96 flowering plants, one of the others had 3 plants and the last had 33 plants. Pulaski County has two known populations; one, supporting 104

flowering plants in 1991, is on the Daniel Boone National Forest, and the other, for which there are no recent estimates of population size, is small and privately owned. Whitley County has one small, privately owned site. There are no recent estimates of the size of this population. Laurel County has two sites for the species, the largest of these (1,745 plants in 1997) is completely on Daniel Boone National Forest land and the other is partially on Forest Service land and partially on privately owned land. There are no recent estimates of the size of this last small population. Deborah White (KNSPC, pers. comm., 2005) stated that all of the sites visited recently had shown alarming declines in the number of plants present, often with no clear indication of what had caused the decline. Current threats include invasive plants, poor land use practices upstream or upslope of the sites and, at least in the past, herbivory (deer).

There are two records for Platanthera integrilabia in Mississippi. One of these is a 1863 collection from Alcorn County and the other is a 1974 collection from Tishomingo County. The species has apparently been lost from these sites and is considered extirpated from the State.

Historically, North Carolina supported at least two populations of the species. One of these was in a Henderson County bog that has been almost completely destroyed and the other was in Cherokee County. The species is believed to be extirpated from North Carolina.

South Carolina is believed to support one population on a State owned site in Greenville County. This site is in an isolated location and plants have not been observed there since 1989. During the 1989 survey of the site 11 flowering plants were found. Several visits to the site have been made since 1989. Although the species hasn't been seen recently conditions at the site appear to remain unchanged. The terrain is very steep and the area is very difficult to survey. Consequently, this population is believed to still exist and more intensive efforts will be needed to relocate the plants.

In Tennessee, Franklin County supports five privately owned Platanthera integrilabia sites. Four of these are very small and contained 2, 3, 5 and 10 plants, respectively, in 1991. The fourth site is larger and contained 200 to 300 plants in 1998. Grundy County supports nine populations. Three of these are on State owned lands and in the most recent surveys contained 6, 6 and 34 plants, respectively. The remaining six sites are on privately owned land and in the most recent surveys contained 0, 4, 118, 150, 250, and 1,000+ plants, respectively. Sequatchie County has three privately owned populations, one of these had 7 flowering plants in 1991, the second had 12 in that same year, and the third had 91 plants in 1996. Marion County has three populations. Two of the Marion County sites are small and privately owned, one of these had 2 plants and the other 10 plants in 1991. The third site is State owned and supported 65 flowering plants in 1998. Van Buren County has four privately owned sites supporting P. integrilabia. In the most recent surveys of these populations, they contained 76, 86, 128, and 525 flowering plants, respectively. Bledsoe County has two State owned sites; one had 50 plants in 1989 and the other had 600 plants in 1998. There are two federally owned sites in the State, one is in McMinn County on land managed as a botanical area by the Cherokee National Forest. In 1998, thousands of plants were observed at this site. The other federally owned site is also on the Cherokee National Forest and is in Polk County. In 1996, this site contained 40 plants.

In 1942, Platanthera integrilabia was collected from Lee County in southwestern Virginia. The species not been seen in Virginia since then and is believed to be extirpated.

#### THREATS:

##### A. The present or threatened destruction, modification, or curtailment of its habitat or range.

Shea (1992) reported that several populations have been lost to habitat altering activities such as road construction, residential and commercial construction, and soil and site hydrology altering projects that reduced site suitability for the species. She estimated that these activities continued to threaten at least 50 percent of the remaining populations in 1992. Several of the known populations are in or adjacent to powerline rights-of-way. Mechanical clearing of these areas may benefit the species by maintaining adequate light levels; however, the use of herbicides could pose a significant threat to the species. All-terrain vehicles have damaged several sites and pose a threat to most sites (Shea 1992). White (1998) notes that most of the known sites for the species occur in areas that are managed specifically for timber production. Timber management is not necessarily incompatible with the protection and management of Platanthera integrilabia. However, care must be taken during timber management to ensure that the hydrology of the bogs that support the species is not altered, that any heavy equipment used is kept out of the species' habitat, and that the vegetation is managed in a manner that maintains suitable light and moisture conditions. Natural succession can result in decreased light levels. This decrease can initially cause reduced vigor, flowering, and reproduction. If continued, it can make a site unsuitable for the species. Loss of sites to residential and other construction activities remains a threat to most of the privately owned populations. Timber management, if not carried out with the welfare of the species in mind, could negatively alter or destroy its habitat. Deborah White (KNSPC, pers. comm., 2005) stated some populations were declining apparently due erosion of adjacent stream banks. This erosion appeared to have been caused by increase water flows from clear cut areas upstream of the populations. The erosion seemed to have lowered the streambed which resulted in water moving off the sites supporting the plants more quickly resulting in drier sites.

##### B. Overutilization for commercial, recreational, scientific, or educational purposes.

Collecting for commercial and other purposes is a threat to Platanthera integrilabia. Shea (1992) reports that the species may have been extirpated from its type locality by collecting and that, at that time, at least two Tennessee nurseries sold plants collected from wild populations. Because of the small size of many populations, collecting, even for scientific purposes, could easily extirpate the species from many areas.

##### C. Disease or predation.

Zettler and Fairey (1990) stated that herbivory and disease both threatened this species. They reported herbivore damage to Platanthera integrilabia, ranging from 11 percent to almost 24

percent of the plants present at the South Carolina and Georgia sites they studied. They also noted plant damage caused by several fungal pathogens. White (1998) reported that herbivory (primarily deer) continues to threaten the species at several sites, and that at one site it is threatened by wild boar rooting.

D. The inadequacy of existing regulatory mechanisms.

Some of the sites supporting Platanthera integrilabia are under the jurisdiction of State and Federal wetlands protection regulations such as those developed under the Clean Water Act. However, because of their size and isolation from larger aquatic systems, most sites are not under the jurisdiction of these programs. Additionally, many of the activities that threatened the species would take place in areas adjacent to, rather than in, the bogs supporting the species and, therefore, are not subject to wetlands regulations regardless of the size or location of the wetland.

Of the states currently having populations of Platanthera integrilabia, only Tennessee and Georgia have legislation that provides some protection for the species at the state level. These states regulate commerce and taking of the species without the permission of the landowner.

E. Other natural or manmade factors affecting its continued existence.

Little, if any, vegetative reproduction takes place in Platanthera integrilabia, and it is apparently primarily dependent upon sexual reproduction. Zettler and Fairey (1990) reported that only 2.8 percent to 4.6 percent of the plants within a population flower in any given year and of these, only 6.9 percent to 20.3 percent will set seed. This results in a very low production of seeds and, consequently, a limited ability to reproduce at most sites.

White (1998) notes that the recovery of this species will be dependent upon active habitat management rather than just habitat preservation. Because of the species' dependence upon moderate to high light levels, some type of active management to prevent complete canopy closure is required at most locations. Invasive nonnative plants such as Japanese honeysuckle (Lonicera japonica) and kudzu (Pueraria lobata) threaten several sites and, if left uncontrolled, can extirpate the species (Zettler and Fairey 1990).

## CONSERVATION MEASURES PLANNED OR IMPLEMENTED

The Nature Conservancy has registered one of the privately owned Grundy County, Tennessee, sites as a natural area. In 1980, this site supported 250 plants; however, the number of plants present in recent years has been greatly reduced and some active management of the site may be needed. One of the 12 sites in Federal ownership is designated as a Botanical Area by the U.S. Forest Service. The South Carolina site and several of the Tennessee sites are within State parks. This provides these sites with some degree of protection, but does not necessarily ensure that they will receive the management that may be needed to maintain the species.

Several years ago, we and the U.S. Forest Service initiated discussions on the feasibility of developing a conservation agreement to protect Platanthera integrilabia. No recent work has

been devoted to this effort because of the large number of sites in private ownership and the inability to develop an agreement that would protect enough populations to ensure the long-term survival of the species.

The Service provided a grant to the Kentucky State Nature Preserves Commission to develop site conservation plans for the higher quality Platanthera integrilabia sites that remain in existence. A report containing conservation plans for 29 sites was prepared by White (1998). The threats to most sites and the active management needs identified in this report indicate that long-term protection of Platanthera integrilabia can best be achieved through the Federal listing process.

Dennis Krusac and Wayne Owen of the U.S. Forest Service's Southern Region supported the elevation of this species to candidate status and have offered to work with us in protecting the populations that occur on Forest Service lands. The Natural Heritage Programs and/or State Plant Protection Programs in Alabama, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia were all contacted concerning elevation of this species to candidate status. All supported this effort and offered their assistance in protective efforts in the future.

The Calhoun County, Alabama, populations of this species are now part of a newly established National Wildlife Refuge that will provide permanent protection to these populations.

**SUMMARY OF THREATS** (including reasons for addition or removal from candidacy, if appropriate): Several populations have been lost to road, residential and commercial construction, and to soil and site hydrology altering projects that reduced site suitability for the species. Several of the known populations are in or adjacent to powerline rights-of-way. Mechanical clearing of these areas may benefit the species by maintaining adequate light levels; however, the use of herbicides could pose a significant threat to the species. All-terrain vehicles have damaged several sites and pose a threat to most sites. Most of the known sites for the species occur in areas that are managed specifically for timber production. Timber management is not necessarily incompatible with the protection and management of the species. However, care must be taken during timber management to ensure that the hydrology of the bogs that support the species is not altered. Natural succession can result in decreased light levels. Because of the species' dependence upon moderate to high light levels, some type of active management to prevent complete canopy closure is required at most locations. Collecting for commercial and other purposes is a threat. Herbivory (primarily deer) threatens the species at several sites. Protection and recovery of this species is dependent upon active management rather than just preservation of its habitat. Invasive, nonnative plants such as Japanese honeysuckle and kudzu threaten several sites. Given the current threats to this species we consider the magnitude of threat to be high.

For species that are being removed from candidate status:

\_\_\_\_ Is the removal based in whole or in part on one or more individual conservation efforts that you determined met the standards in the Policy for Evaluation of Conservation Efforts When Making Listing Decisions (PECE)?

## RECOMMENDED CONSERVATION MEASURES

### LISTING PRIORITY:

THREAT			
Magnitude	Immediacy	Taxonomy	Priority
<b>High</b>	Imminent	Monotypic genus	1
		Species	2
		Subspecies/population	3
	<b>Non-imminent</b>	Monotypic genus	4
		<b>Species</b>	<b>5*</b>
		Subspecies/population	6
Moderate to Low	Imminent	Monotypic genus	7
		Species	8
		Subspecies/population	9
	Non-imminent	Monotypic genus	10
		Species	11
		Subspecies/population	12

**Rationale for listing priority number:** Several White fringeless orchid populations have been lost to road construction, residential and commercial construction, and soil and site hydrology altering projects that reduced site suitability for the species. Several of the known populations are in or adjacent to powerline rights-of-way. Mechanical clearing of these areas may benefit the species by maintaining adequate light levels; however, the use of herbicides could pose a significant threat to the species. All-terrain vehicles have damaged several sites and pose a threat to most sites. Most of the known sites for the species occur in areas that are managed



specifically for timber production. Timber management is not necessarily incompatible with the protection and management of Platanthera integrilabia. However, care must be taken during timber management to ensure that the hydrology of the bogs that support the species is not altered. Natural succession can result in decreased light levels. This decrease can initially cause reduced vigor, flowering, and reproduction. If continued, it can make a site unsuitable for the species. Collecting for commercial and other purposes is a threat to Platanthera integrilabia. Herbivory (primarily deer) threatens the species at several sites. Protection and recovery of this species is dependent upon active management rather than just preservation of its habitat. Because of the species dependence upon moderate to high light levels, some type of active management to prevent complete canopy closure is required at most locations. Invasive nonnative plants such as Japanese honeysuckle (Lonicera japonica) and kudzu (Pueraria lobata) threaten several sites and, if left uncontrolled, will extirpate the species.

Yes Have you promptly reviewed all of the information received regarding the species for the purpose of determining whether emergency listing is needed?

Is Emergency Listing Warranted? No – see above discussion. The threats faced by these species are significant, however, it is not anticipated that a significant number of the known populations will be subject to these threats in the immediate future (next 1-2 years).

DESCRIPTION OF MONITORING: The State agencies responsible for plant protection, the US Forest Service and the Service monitor sites supporting the species when time is available for this activity, funds specifically designated for monitoring are currently not available to the states or the Service.

#### COORDINATION WITH STATES

Indicate which State(s) (within the range of the species) provided information or comments on the species or latest species assessment: South Carolina, Tennessee and Kentucky

Indicate which State(s) did not provide any information or comments: Alabama and Georgia

#### LITERATURE CITED

Correll, D. S. 1941. Two new American orchids. Harvard University Botanical Museum Leaflet 9:152-157.

Leur, C. A. 1975. The Native Orchids of the United States and Canada excluding Florida. The New York Botanical Garden. New York, New York.

Medley, Max E. 1980. Status Report on Platanthera integrilabia. Unpublished report to the U.S. Fish and Wildlife Service, Southeast Region. 34 pp.

Shea, Margaret M. 1992. Status Survey Report on Platanthera integrilabia. Unpublished report to the U.S. Fish and Wildlife Service, Southeast Region. 152 pp.

White, Deborah. 1998. Site Conservation Plans for Platanthera integrilabia (White Fringeless Orchid). Unpublished report to the U.S. Fish and Wildlife Service, Southeast Region. 106 pp.

Zettler, L. W. and J. E. Fahey, III. 1990. The status of Platanthera integrilabia, an endangered terrestrial orchid. *Lindleyana* 5:212-217.

APPROVAL/CONCURRENCE: Lead Regions must obtain written concurrence from all other Regions within the range of the species before recommending changes, including elevations or removals from candidate status and listing priority changes; the Regional Director must approve all such recommendations. The Director must concur on all resubmitted 12-month petition findings, additions or removal of species from candidate status, and listing priority changes.

Approve: /s/ Jeffrey M. Fleming 11/16/2005  
Acting Regional Director, Fish and Wildlife Service Date



Concur: \_\_\_\_\_ August 23, 2006  
Acting Director, Fish and Wildlife Service Date

Do Not Concur: \_\_\_\_\_  
Director, Fish and Wildlife Service Date

Date of annual review: October 2005

Conducted by: Asheville, North Carolina Field Office